CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 70-88

AMENDING REQUIREMENTS AS TO THE NATURE OF THREE EXISTING WASTE DISCHARGES BY UNITED STATES STEEL CORPORATION, PITTSBURG WORKS, INTO NEW YORK SLOUGH AND ONE DISCHARGE ONTO LAND NEAR PITTSBURG, CONTRA COSTA COUNTY, AND AMENDING RESOLUTION NO. 594

WHEREAS THIS REGIONAL BOARD HAS CONSIDERED

REPORT ON WASTE DISCHARGE

1. United States Steel Corporation, Pittsburg Works, called the discharger below, filed a Report on Waste Discharge dated December 30, 1969 with this Regional Water Quality Control Board to inform it of changes in the nature and the proposed change in discharge point of certain wastes, pursuant to Section 13260(b) of the California Water Code. The waste discharges as they now exist are regulated by requirements which the Regional Board prescribed in Resolution No. 594.

2. That Report and other data describe these waste discharges as follows:

   a. Waste "1" is about 1.4 mgd of industrial wastes only from wire pickling and galvanizing; cooling water used to quench zinc-coated wire products; chemical laboratory wastes and storm drainage from surfaced and unsurfaced areas used for storage and handling of wire coils and other insoluble materials. These industrial wastes include periodic discharges of hydrochloric acid pickling wastes, sulfuric acid pickling sludge, lime solutions, and copper sulfate solutions.

      1. Existing treatment facilities for Waste "1" consist of a settling pond with nominal residence time of one to 1-1/2 hours. Settleable matter which accumulates in this pond is dredged out periodically and placed in an area that is adjacent to and drains into the pond.

      2. The liquid effluent from this pond is being discharged above the water surface of New York Slough at a point about 1100 feet west of the western end of the discharger's ship dock via an open ditch identified herein as Outfall "1".

   b. Waste "2" is about 10 mgd of industrial waste only from steel strip pickling, rolling, cleaning, annealing and electro-tinning operations. Waste "2" also includes waste water from a nail galvanizing fume scrubber, nail galvanizing quench water, once through cooling water, blowdown from the boiler house, water softeners, water treatment plant and a closed cooling water recirculating system. Waste "2" also

includes treated effluent from the central waste oil separation plant and storm drainage from surfaced and unsurfaced areas used for storage of steel billets and products. Waste "2" includes periodic discharge of process solutions containing ortho silicates and wetting agents at a pH of 10 to 11.

1. Existing treatment facilities for Waste "2" or portions of it consist of:

   A central waste oil separation plant with a design capacity of 500 gpm is used to separate emulsified oil from waste rolling solution generated at three cold strip reduction mills and two pickle lines.

   Chemicals used are about 215-300 gallons of waste pickle liquor and 70-80 gallons of liquid caustic (50% NaOH) per 8-hour shift.

   Effluent from this treatment unit is about 300-400 gpm of clarified water containing 10-20 ppm of oil and becomes part of Waste "2" as fed to the two settling ponds discussed below.

   Two settling ponds in parallel flow having a nominal residence time of one to 1-1/2 hours receive some pretreated wastes as discussed above. Settleable matter is dredged out periodically and placed in an area that is adjacent to and drains into the ponds.

2. Waste "2" is being discharged above the water surface of New York Slough at a point near the western end of the discharger's ship dock via an open ditch identified herein as Outfall "2".

c. Waste "3" is about 8.5 mgd of industrial wastes only from pipe pickling and galvanizing; and from steel strip pickling, rolling, galvanizing and electro-tinning operations. Waste "3" also includes once through cooling water, quench and rinse water from galvanizing and electro-tinning operations, and storm drainage from surfaced and unsurfaced areas used for automobile parking, truck loading, and outside storage of steel coils and billets. Waste "3" includes periodic discharge of caustic soda process solutions and sludges containing sodium dichromate.

1. Existing treatment facilities for Waste "3" consist of a 12-foot by 1500-foot settling ditch. Settleable matter which accumulates in this ditch is dredged out periodically and placed in Land Disposal Site "L-A".

2. Waste "3" is being discharged above the water surface of New York Slough at a point about 1000 feet east of the western end of the discharger's ship dock via an open ditch identified herein as Outfall "3".

d. Waste "A" is industrial waste only and consists of a mixture of numerous items such as clean fill, broken concrete, broken bricks, ferrous metals, non-ferrous metals, scrap lumber, lumber products, metal slag, metal drums, metal pails, discarded rubber products, sludge residues from waste water settling ponds, etc.

1. Waste "A" is being deposited in a 135-acre confinement site lying north of the Queros (Kirker) Creek Diversion Canal, south of the AT&SF Railway Company's main line, east of the discharger's employment offices, and west of the Continental Can Company's plant site on Loveridge Road. The discharger states that he has never observed drainage from this site, and that any drainage that might leave it would enter sewers tributary to his outfall "3". This confinement area is identified herein as Land Disposal Site "L-A".

CORRESPONDENCE

This Regional Board has considered recommendations about this matter from:

1. Two memoranda from State Department of Fish and Game, each dated October 13, 1970.

2. Memoranda from State Department of Public Health, Bureau of Sanitary Engineering, dated September 18 and October 9, 1970.

3. Memoranda from State Department of Public Health, Bureau of Vector Control and Solid Waste Management, dated September 23 and October 9, 1970.

STAFF INVESTIGATION

1. These waste discharges can affect the following existing and proposed beneficial water uses of New York Slough and contiguous waters:

Seasonal source of domestic water supply at Antioch and at Mallard Slough

Industrial cooling and process water supply year-round

Swimming, water-skiing, wading, pleasure boating, marinas, fishing and hunting

Fish, shellfish, and wildlife propagation and sustenance, and waterfowl and migratory birds habitat and resting

Navigation channels and port facilities

Esthetic enjoyment.

2. Land within 1000 feet of the waste discharges is used for industry and transportation.

3. The wastes in Land Disposal Site "L-A" contain matter which the Regional Board has defined as requiring confinement in Class I dumpsites.

4. Tidal waters east of the westerly end of Chipps Island have been available for domestic, industrial, and agricultural water supplies such that the mean tidal cycle chloride concentrations at Chipps Island have not exceeded 150 mg/l for an average of 150 days between November 1 and June 30 from 1944 through 1965.

RESOLVED BY THIS REGIONAL BOARD

BOARD INTENT

1. Protect public health as it may be affected by this waste discharge.

2. Prevent nuisance, as defined in Section 13050(m) of the California Water Code.

3. Protect the beneficial water uses listed under "Staff Investigation" above.

WASTE DISCHARGE REQUIREMENTS - RECEIVING WATERS

1. The treatment or disposal of wastes shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharges shall not:

   a. Unreasonably affect any of the protected beneficial water uses resulting from:

      Floating, suspended, or deposited macroscopic particulate matter, or foam in waters of the State at any place

      Bottom deposits at any place

      Aquatic growths at any place

      Alteration of temperature, color or turbidity beyond present natural background levels in waters of the State at any place.

   b. Cause visible, floating, suspended or deposited oil or other products of petroleum origin in waters of the State at any place.

3. The discharge of Wastes "1", "2", and "3" shall not cause waters of the State to exceed the following limits of quality at any point:

   a. Dissolved oxygen — 5.0 mg/l minimum

   b. Dissolved sulfide — 0.1 mg/l maximum

c. Other substances — any one or more substances in concentrations that impair any of the protected beneficial water uses or make aquatic life or wildlife unfit or unpalatable for consumption.

4. Cause the waters of the State at any point east of the western end of Chipps Island and within 2000 feet of any diversion being used for a domestic water supply to exceed the following limits of quality:

Carbon chloroform extract	0.2 mg/l, maximum
Chromium, hexavalent	0.02 mg/l, maximum
Phenols	0.001 mg/l, maximum.

5. Waste "A" shall be confined to Land Disposal Site "L-A" at all times, and shall not cause any of its components to be:

   a. On the ground surface outside of Land Disposal Site "L-A" at any time.

   b. Below the ground surface at any point more than 500 feet outside the periphery of Land Disposal Site "L-A" at any time.

      1. If components of this Waste are found in such samples, the discharger shall provide positive means for totally confining the waste.

6. The disposal site "L-A" shall be adequately protected against runoff and flooding by storm waters. Adequate protection is defined as protection from at least a 100-year flood.

WASTE DISCHARGE REQUIREMENTS - WASTE STREAMS

1. Wastes "1", "2", and "3" as discharged to waters of the State shall meet these quality limits at all times:

   a. In any grab sample:

pH	7.0 minimum 8.5 maximum
Settleable matter	
The arithmetic average of any six or more samples collected on any day	0.5 ml/l/hr., maximum
80% of all individual samples collected during maximum daily flow over any 30-day period	0.4 ml/l/hr., maximum
Any sample	1.0 ml/l/hr., maximum.

b. In any representative, 24-hour composite sample:

Aluminum, dissolved	1.0 mg/l, maximum
Chromium, total	1.0 mg/l, maximum
Copper	0.5 mg/l, maximum
Iron, dissolved:	
Any such sample	7.0 mg/l, maximum
Average of any five consecutive samples	3.0 mg/l, maximum
Lead	0.05 mg/l, maximum
Mercury	0.005 mg/l, maximum
Nickel	5.0 mg/l, maximum
Zinc	1.0 mg/l, maximum
Nutrients	to be prescribed at the earliest practicable date
Ammonium hydroxide, undissociated	to be prescribed at the earliest practicable date

c. In any representative set of samples:

Toxicity: survival of test fishes in 96-hour bioassays of the waste as discharged

Any determination	70%, minimum
Average of any three or more consecutive determinations made during any 21 or more days	90%, minimum
Grease	15 mg/l, maximum

d. 5-day, 20°C BOD removal from the waste as indicated by analysis of 24-hour composite samples of effluent and influent shall be sufficient to maintain the dissolved oxygen concentration prescribed above. When the dissolved oxygen is less than the concentration prescribed above the BOD removal during the preceding 21 days shall be at least

Average	90%
Not more than two consecutive daily determinations shall indicate BOD removals less than	80%.

REPORTING REQUIREMENTS

1. Pursuant to Sections 13267(b) and 13268 of the California Water Code, the Regional Board requires the discharger to file by November 19, 1970 a technical report and a schedule for achieving compliance with the waste discharge requirements contained in this Resolution.

2. This Resolution includes items numbered 1, 3, 6, and 7 of the attached "Reporting Requirements", dated August 28, 1970.

NOTIFICATIONS

1. This Board's Resolution No. 594 is amended.

2. This Resolution includes items numbered 1, 2, 3, 4, 5, and 6 of the attached "Notifications", dated January 6, 1970.

3. Maximum allowable concentrations of heavy metals will be reviewed in April, 1971 and may be reduced at that time or in the future to provide protection of the environment.

WILLIAM C. WEBER
Chairman

November 4, 1970

I, Fred H. Dierker, hereby certify that the foregoing is a true and correct copy of Resolution No. 70-88 adopted by the California Regional Water Quality Control Board - San Francisco Bay Region at its special meeting on November 4, 1970.

FRED H. DIERKER
Executive Officer
CALIFORNIA REGIONAL WATER QUALITY CONTROL
BOARD - SAN FRANCISCO BAY REGION